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A New Record and a New Species in *Myelochroa* (Parmeliaceae)

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Myelochroa denegans, a rare species known only from India and Sri Lanka, is first reported from Java, Indonesia. *Myelochroa siamea* characterized by the production of galbinic acid is described as new to science. The new species is more closely related to *M. irrugans* than to *M. galbina*, though it produces galbinic acid.

In course of study on Japanese species of *Myelochroa* (Kurokawa and Arakawa 1997), I found two interesting species collected in southern Asia. The one is *M. denegans* and the other is *M. siamea*, a new species. In the present paper, *M. denegans* is reported from Indonesia for the first time and *M. siamea* is described as new to science.

Myelochroa denegans (Nyl.) Elix & Hale

Myelochroa denegans is characterized by having pustules on lobes and producing reddish orange pigments in the lower part of the medulla (Hale 1976). Even though a specimen collected in Indonesia (Fig. 1) is very small (1.2 × 1.8 cm and 1.2 × 2.4 cm), reddish yellow pigments (K + purple) characteristic of *M. denegans* are found in the lower part of the medulla. Lobes are pustulate-sorediate and the soredia are more or less farinose as Hale (1976) reported. Thus, the specimen is identified with *M. denegans.*

Myelochroa denegans has been reported from India and Sri Lanka (Hale 1976) and the distribution range is now extended to Indonesia. It seems to be rather widely but only sporadically distributed in southern Asia.

The present species resembles *M. aurulenta*, a common species widely distributed in temperate zones, including India, Sri Lanka and Indonesia (Kurokawa and Arakawa 1997). However, it is easily distinguished from the latter by the production of K + pigments in the medulla. It is apparently more closely related to *M. amagiensis* (Asahina) Elix & Hale, a species endemic to Japan (Kurokawa and Arakawa 1997), since they both produce simi-

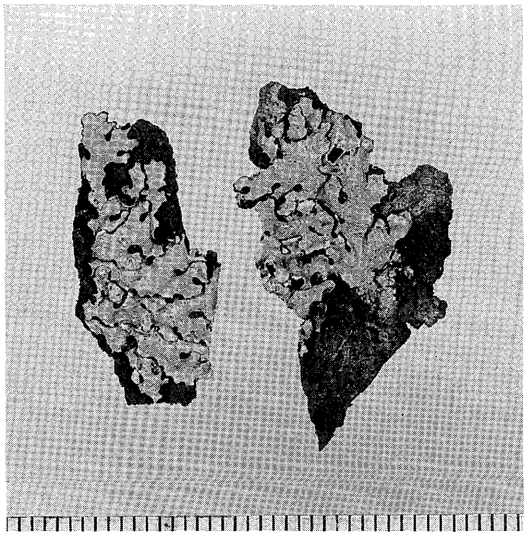

Fig. 1. *Myelochroa denegans* (Nyl.) Elix & Hale. S. Kurokawa 2171 (TNS). Scale indicates mm.

lar K + pigments in the lower part of the medulla. Although the distribution ranges are quite different in these two species, the present species can be considered as the pustulate-sorediate morph of *M. amagiensis*.

Specimen examined. Indonesia. Java: Mountain Garden of Tjibodas, elevation about 1400 m, S. Kurokawa 2171 (TNS).

Myelochroa siamea Kurok., sp. nov.

Thallus ut in *Myelochroa irruganti* sed medulla intense flava et thallo acidum galbinicum continenti differt.

Thallus adnate on bark of trees, mineral gray, turning pale brownish buff in the herbarium, 2.5 × 4.5 cm broad; lobes sublinear, more or less crowded, 1.5–3.0 mm wide, the margins more or less crenate, sparsely ciliate mainly in lobe axils, the cilia black, simple, 0.1–0.7 mm long; upper surface dull, minutely rugulose on older lobes; medulla deep yellow, K–; lower surface black, densely rhizinate, the rhizines black, mostly simple, 0.2–1.0 mm long. Thallus 290–310 μm thick; upper cortex 15–30 μm thick; algal layer continuous, 30–50 μm thick; medulla lacking moniliform cells, 160–210 μm thick; lower cortex brownish, 14–23 μm thick. Apothecia sessile, 2–4 mm in diameter, disc brown, amphithecium smooth; hymenium 70–80 μm high; asci 8-spored, spores colorless, 6–9 × 13–16 μm.

Chemistry. Atranorin, zeorin, related triterpenoids, galbinic acid, secalonic acid A, secalonic acid C, salazinic acid (trace), eumitrin R (minor) and eumitrin G (trace) (HPLC by Elix).

Holotype. Thailand. Prov. Chien Mai: Maetang District, elevation about 1000 m, S. Kurokawa 1760-b (TNS).

The present new species resembles *M. irrugsans* (Nyl.) Elix & Hale in morphology. It forms closely adnate thalli similar to those formed by some individuals of *M. irrugans*. The medulla is also similarly yellow pigmented with secalonic acid A. However, *M. siamea* is readily distinguished from the latter species by P + orange red colour reaction in the medulla caused by the presence of galbinic acid. Galbinic acid has been reported in *M. galbina* (Ach.) Elix & Hale, *M. hayachinensis* (Kurok.) Elix & Hale, *M. metarevoluta* (Asahina) Elix & Hale and *M. obsessa* (Ach.) Elix & Hale. In these species, moniliform cells are commonly formed in the medulla (Kurokawa and Arakawa 1997). However, *M. siamea* never form moniliform cell in the medulla. In this respect, *M. siamea* can not be considered as belonging to the *M. galbina* group, though it produces galbinic acid and secalonic acid A as in the group.

As mentioned above, the medulla is yellow in both *M. siamea* and *M. irrugans*. However, the medulla is deep yellow in *M. siamea*, while it is lemon yellow, very pale yellow or even almost white in *M. irrugans*, probably depending on the concentration of secalonic acid A. The deep yellow colour in the medulla of *M. siamea* may be caused not only by the high concentration of secalonic acid A but also by the presence of eumitrins R and/or G. According to Elix (personal communication), eumitrins G and R are new substances and he will publish a separate paper on chromatographic properties of them.

The holotype specimen as well as an additional specimen cited below were segregated from collections of *M. xantholepis* (Mont. & Bosch) Elix & Hale (S. Kurokawa 1760 and 1761, respectively). Even though only two specimens have been collected at present, the present species might be much common in evergreen forests in Thailand and the adjacent region, where *M. xantholepis* is found.

Additional specimen examined. Thailand. Prov. Chien Mai: Maetang District, elevation about 1000 m, S. Kurokawa 1761-b (TNS).

I express my sincere thanks to Prof. J.A.

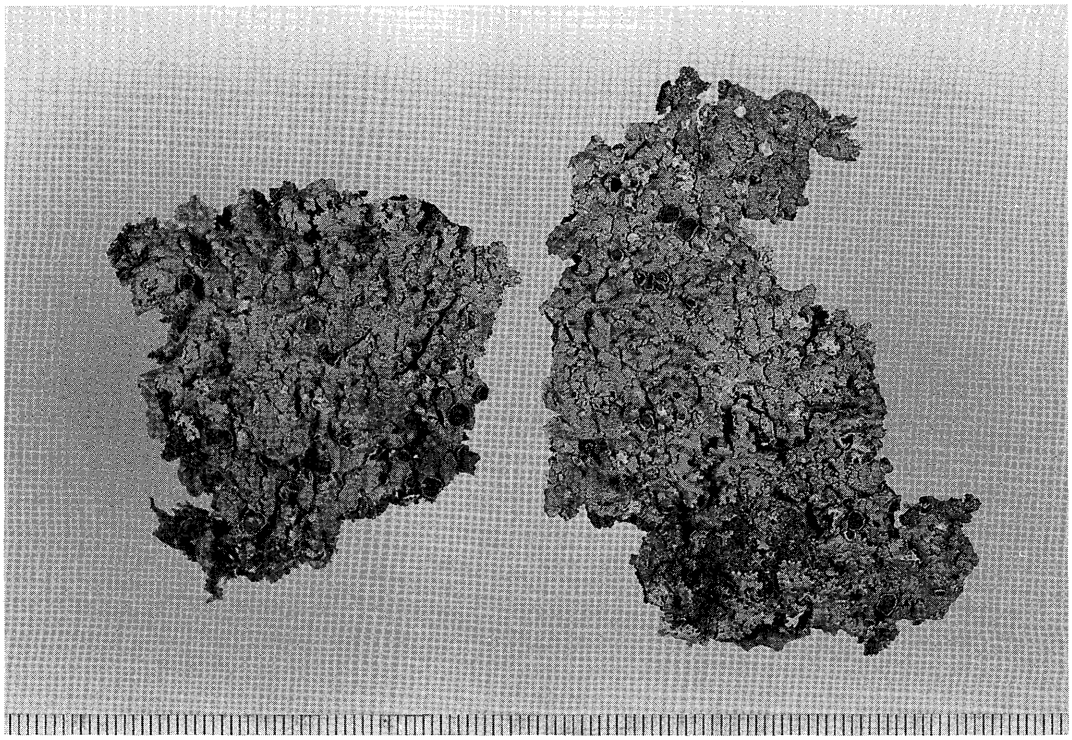

Fig. 2. Holotype of *Myelochroa siamea* Kurok. Scale indicates mm.

Elix of the Department of Chemistry, Australian National University, who provided me the results of HPLC tests on the holotype of *M. siamea.*

Literature cited

Hale, Mason E. 1976. A monograph of lichen genus *Parmelina* Hale (Parmeliaceae). Smiths. Contr. Bot. **33**: 1–60.

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黒川 逍：ウチキウメノキゴケ属の一新産地と一新種

日本産のウチキウメノキゴケ属の検討を進めている間に，南アジア産の興味ある種を発見した．一つはインドとスリランカにしか分布していないとされていた*M. denegans*が，インドネシアのジャヴァ島に分布していることである．もうひとつはタイ産の新種であり，*M. siamea*と命名した．本種はガルビン酸を含み，髄が濃黄色を示す点で，アジアに広く分布しているニセウチキウメノキゴケ（*M. irrugans*）と容易に区別される．ガルビン酸を含んでいるために，チュウゼンジゴケ（*M. galbina* (Ach.) Elix & Hale）群の一種とみなされるかもしれないが，髄層にチョロギ細胞が発見されないので，ニセウチキウメノキ群の一種と考えられる．

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